

CLAIMS

What is claimed is:

1. A driving device of a robot cleaner comprising:
a robot cleaner body;
5 a pair of motors disposed in the robot cleaner body and driven by respective power supplies;
a pair of driving wheels rotated by the pair of motors;
a pair of driven wheels following the pair of driving wheels;
a driving force transmitting means causing the driving wheels and the driven wheels to move
in association with each other;
10 a frame unit disposed in the robot cleaner body to support the pair of driving wheels and the
pair of driven wheels; and
a shock-absorbing unit disposed in the frame unit to absorb shock occurring from a cleaning
surface.
- 15 2. The driving device as claimed in claim 1, wherein the driving force transmitting
means is a timing belt.
3. The driving device as claimed in claim 1, wherein the frame unit is provided with
motor covers, each motor cover extended from the frame unit in an axial direction of the
20 motor.
4. The driving device as claimed in claim 1, wherein the shock-absorbing unit
comprises:
an upper supporting member;
25 a lower supporting member corresponding to the upper supporting member;

an elastic member disposed between the upper supporting member and the lower supporting member; and

a unit shaft penetrating through the upper supporting member, the elastic member, and the lower supporting member.

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5. The driving device as claimed in claim 4, wherein the elastic member is a coil spring.

6. The driving device as claimed in claim 1, wherein the frame unit comprises:
an upper cover;

10 a first lower cover disposed at the upper cover; and

a second lower cover connected to the first lower cover and disposed at the upper cover.

7. The driving device as claimed in claim 6, wherein the upper cover further comprises a supporting member for supporting the shock-absorbing unit, and an opening formed in the
15 supporting member.

8. The driving device as claimed in claim 6, wherein the first lower cover includes a protrusion formed in a side thereof, and the upper cover includes a recess formed therein to allow the protrusion to pivot therein about an axis of the driving wheels.

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9. The driving device as claimed in claim 8, wherein the recess is shaped in an arc.

10. The driving device as claimed in claim 6, wherein the upper cover is securely disposed at the robot cleaner body.

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11. The driving device as claimed in claim 6, wherein the shock-absorbing unit is disposed between the upper cover and the first and the second lower covers and pivots about the axis of the driving wheels together with the driven wheels according to a condition of the cleaning surface.

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12. The driving device as claimed in claim 1, wherein the motors are directly connected to the driving wheels which move the robot cleaner body.

13. The driving device as claimed in claim 1, wherein the driving wheels and the driven
10 wheels have saw-serrated outer circumferences, respectively.